

DEVELOPMENT OPTIONS

NATIONAL HISTORIC SITE

Fort Leno



Descriptive document



Environment Canada
Parks Service

Environnement Canada
Service des parcs

DEVELOPMENT
OPERATIONS
NATIONAL HISTORIC SITE

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Fort Lenoir

Descriptive document



Service de la planification
Service des parcs
Environnement Canada
1991

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	PAGE
INTRODUCTION	3
A BRIEF HISTORY OF THE SITE	6
WITNESS TO HISTORY	9
PRESENT SITUATION	12
DEVELOPMENT ISSUES	14
DEVELOPMENT GUIDELINES	20
CONCEPT	23
DEVELOPMENT OPTIONS	26
ENVIRONMENTAL ASSESSMENT	33
CONCLUSION	39



INTRODUCTION

FORT LENNOX NATIONAL HISTORIC SITE: A FORTIFIED ISLAND

Fort Lennox National Historic Site is located on Île aux Noix, some 30 kilometres south of Chambly and less than 15 kilometres from the American border. It is part of the municipality of Saint-Paul-de-l'Île-aux-Noix.

Île aux Noix has played an important role in Canada's military history. While the current fortifications only date back to the 1820s, the site is a reminder of the long history of the Hudson River-Lake Champlain-Richelieu River waterway as a gateway for invasion into Canada from the south. Fort Lennox's stone buildings are a magnificent example of early 19th-century military architecture.

Fort Lennox is located on the southern tip of Île aux Noix, which has a total area of 85 hectares. The fort, built between 1819 and 1829, is surrounded by steep earthen ramparts, which are in turn girdled by a wide moat. Inside the fort are officers' quarters (classified by the Federal Heritage Building Review Office), a canteen, a guardhouse, powder magazine, two stores and casemates (recognized by the Federal Heritage Building Review Office).

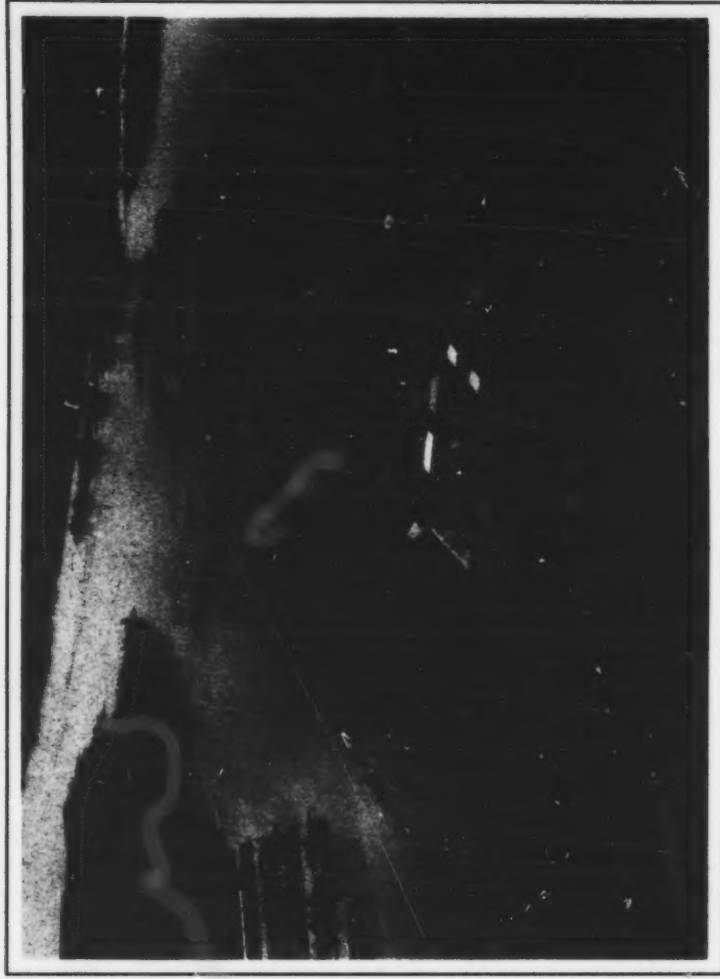
The site was designated a national historic site in 1921, and was integrated into Canada's national park and historic site system in 1940.

THE CANADIAN PARKS SERVICE POLICY AND MANDATE

The Canadian Parks Service policy sets out certain guidelines for the creation, development and management of national historic sites.

The development of Fort Lennox National Historic Site has been planned in accordance with the fundamental objectives for every national historic site, as expressed in the Canadian Parks Service policy:

*To protect for all time
historic resources at places associated
with persons, places and events of
national historic significance in a system
of national historic parks, and to
encourage public understanding, appre-
ciation and enjoyment of this historical
heritage so as to leave it unimpaired for
future generations . . .*



The specific mandate of the Canadian Parks Service for the Fort Lennox National Historic Site consists in preserving, presenting and helping visitors to appreciate the site's historical heritage while commemorating the role Île aux Noix played in Canada's military history in the 18th and 19th centuries.

*Parks Canada, Parks Canada Policy, Ott., 1979.

THEMES AND OBJECTIVES OF THE SITE

The development of Fort Lennox National Historic Site must be in keeping with approved themes and objectives. Defining the themes and objectives of a site is, in fact, the first step in the planning process and is intended to serve as a basis for the site's development.

At Fort Lennox, five themes have been identified, with emphasis being placed on British occupation of the island:

Ile au Noix: Two Centuries of Military and Civilian Occupation

- from a French entrenchment to a British border post
- from the departure of British troops to today

Fort Lennox: Military Camp for 19th-Century Garrisons

- organization and operation of the post
- military and paramilitary activities
- living conditions in the garrison

Fort Lennox: A Feat of British Military Engineering

- regional conditions
- previous forts
- classic fortification:
- the buildings:

Shipbuilding

- techniques and materials
- ships: types and design, value and use
- the shipbuilders

Nature and Civilization on Ile aux Noix

- changes to landscape for military and other purposes
- the current environment (flora and fauna)

Resource preservation and development objectives are as follows:

- *to ensure the preservation of Ile aux Noix's historic resources for present and future generations;*
- *to develop the historical themes for visitors by means of interpretation and various publications;*
- *to protect as much as possible the park's natural environment and the surrounding waters, while stressing the presence of historical resources;*
- *to favor the discovery of the park's resources by providing visitors with appropriate services;*
- *to contribute to the enhancement of the Haut-Richelieu's heritage and participate in the growth of cultural tourism in the Greater Montréal area.*

A BRIEF HISTORY OF THE SITE

Located on the Richelieu River a few kilometres away from the American border, Île aux Noix played a key role in Canada's defences, particularly in the 18th and 19th centuries. The invasion route formed by Lake Champlain and the Richelieu River has been the theatre of several military operations since the early 18th century, the War of the Spanish Succession (1701-1714) being the catalyst for the first skirmishes at Lake George. However, it was not until the Seven Years' War (1756-1763) that Île aux Noix truly burst onto the historical scene.

THE BATTLE OF ÎLE AUX NOIX

The British battle plan of 1760 called for a three-year joint offensive with Montréal as the target. The first assault, led by General Murray, moved up the St. Lawrence from Québec City. The second, under the command of General Amherst, left from Oswego, on the shores of Lake Ontario. The third, commanded by Colonel William de Haviland, took the Lake Champlain-Richelieu River route.

The French, commanded by Brigadier François de Bourlamaque, had been prepared for a decisive assault since 1759. The strategy adopted consisted in delaying the British advance as long as possible in the hopes that a hasty peace would be reached in Europe before New France was conquered.

Bourlamaque chose to trick the British by strengthening the two most forward outposts, forts Carillon (Ticonderoga) and Saint-Frédéric, then destroying them when the British arrived, and retreating to Île aux Noix, which he felt would be easier to supply. The French strategists felt that, once fortified, the island could neutralize any attempt at an invasion by way of the Richelieu.

The fortification of Île aux Noix began in the spring of 1759. The goal was to build entrenchments for 500 men and batteries in order to prevent any approach and cover the channels each side of the island. However, the lack of time and labour as well as the poor quality of building materials did not allow for completion of the planned fortifications.

The French did manage, however, to build entrenchments made up of stockades, moats, and embrasures, and to block passage through the channels using log booms.

The siege of the French entrenchments began August 16, 1760. Haviland and his 3400-man army gained a foothold on the eastern shore of the Richelieu less than three kilometres upriver from Île aux Noix, and set up their batteries. Bourlamaque's successor, Colonel Louis-Antoine de Bougainville, prepared to withstand the siege with 1400 poorly trained soldiers lacking both ammunition and provisions.

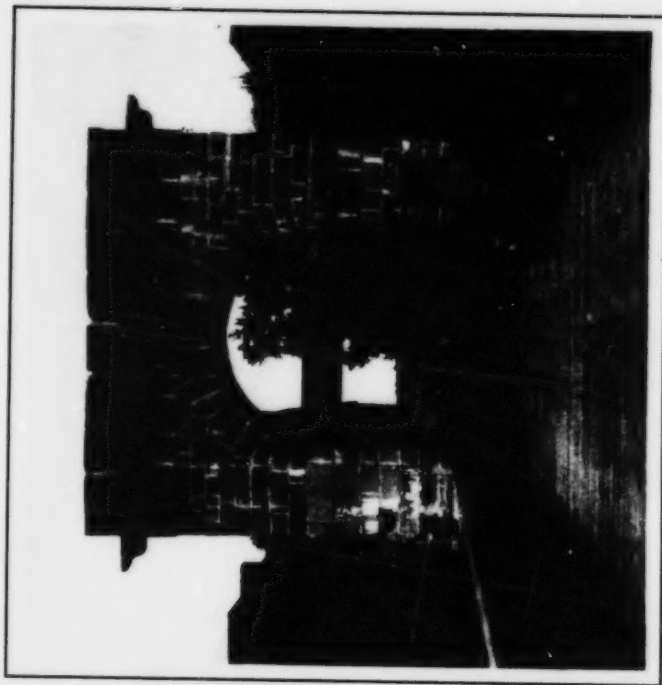
By August 25, the British had won a decisive victory by seizing the vanquished fleet and cutting off all communication with the French posts behind the lines. The French-Canadian forces were thus exposed to attack from the island's north end. Two days later, Bougainville decided to evacuate his position and withdraw to Saint-Jean, then Montréal. He left a detachment of 60 men on the island to cover the troop's retreat. The detachment followed the next day. The way was now open to Haviland, who then had to join forces with Amherst and Murray.

Several weeks after the fall of Montréal, in October, General Amherst, now withdrawing, decided to dismantle the French fortifications on Île aux Noix, as well as the batteries built by Haviland's troops.

A BRITISH DEFENCE POST

Île aux Noix was to see renewed military activity during the American Revolution (1775-1782). In 1775, the American General Shuyler used the island as a base to launch an attack on Montréal; the following year, it was used as a strategic refuge for the withdrawing revolutionaries. Île aux Noix was to become the most forward British defence post on the Richelieu river route and would serve as a point of departure for the expeditions led by Guy Carleton and John Burgoyne. Henceforth considering the island a major border post, English authorities decided to fortify it. The engineer William Twiss was put in charge of the plans.

At the outset, the idea was to transform the French fortifications so as to house a small garrison. Several blockhouses were built and by 1779, the fortifications could withstand an attack, but not a siege. It was not until 1782 that the decision was made to build five masonry redoubts, three of which were actually completed.



Twenty years later, the War of 1812 led once again to military operations in the strategic Lake Champlain-Richelieu River corridor. As naval forces were being called upon to play a major role in this theatre of conflict, a shipyard and naval base were built on Île aux Noix to offset the danger represented by the American fleet patrolling Lake Champlain. A number of small warships, including the frigate "Confiance", were thus built at the island's shipyards and pitted themselves against the American vessels, most notably at the Battle of Plattsburg.

With a superior fleet and better organization, the Americans carried the day in this naval engagement, the last of the war on Lake Champlain. The losses suffered during the exchange, however, prevented them from pursuing the enemy and capitalizing on their advantage. The Île aux Noix shipyard continued its activities for a year after the end of hostilities, but the signing of the peace treaty led to a gradual slowdown in construction, particularly during the 1820s. By 1834, the yard had ceased all activity. But the War of 1812 had called the strategic position of Île aux Noix into question. With the opening of a road linking Missisquoi Bay to Saint-Jean, the importance of the Haut-Richelieu dwindled and, consequently, so did that of Île aux Noix. Colonial administrators nevertheless decided to build new fortifications on the island. The reason given was the construction by the Americans of Fort Montgomery at Rouses Point.

Construction, which lasted from 1819 to 1829, was based on plans drafted by the engineer Gother Mann. His design included a rectangular earthen compound with angled bastions, a moat, redans and ravelins. A number of buildings in the neo-classical style were also erected, including a barracks, officers' quarters, a guardhouse, warehouses and a powder magazine. The new fort would bear the name Lennox, in memory of Charles Lennox, Duke of Richmond, who died in 1819 while holding the position of Governor General.

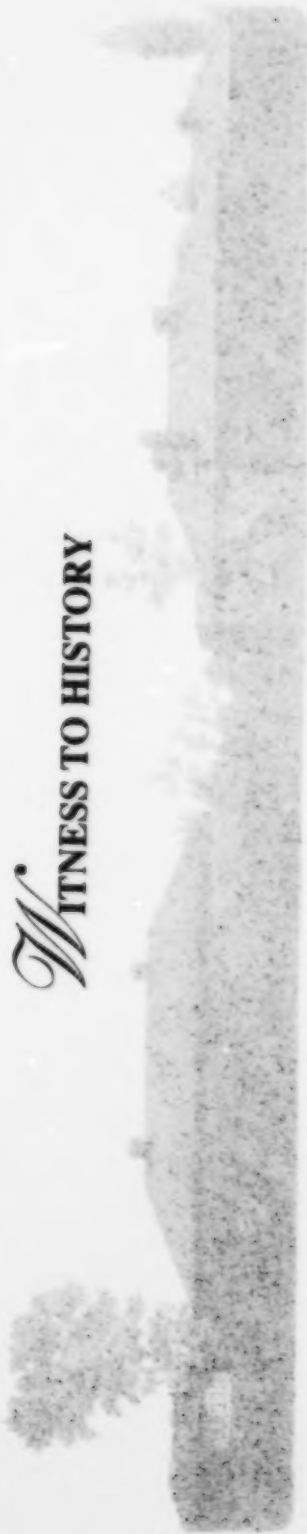
With the construction of the Chambly Canal between Saint-Jean and Chambly and of the railway between Laprairie and Saint-Jean during the 1830s, Saint-Jean became the focal point of the valley. However, defending Saint-Jean did not seem to concern those in charge any more than defending Île aux Noix did. This period even saw the definitive closure of the shipyard.

In 1837-1838, the rebellion of the Patriotes in Lower Canada led to renewed activity on Île aux Noix. The island became a base for military operations aimed at stamping out the rebellion. Once the rebels were defeated, Fort Lennox was considered to be of secondary importance; only the Fenian threat and the American Civil War rekindled military activity on the island between 1860 and 1869.

NEW ACTIVITIES

The British left Île aux Noix for good in 1870. The Canadian government chose not to reoccupy Fort Lennox as the Treaty of Washington eliminated any threat of conflict for a long time to come. The island was therefore leased to individuals, mainly farmers, who grazed their cattle there. In 1899, Fort Lennox was leased to a man named Naylor, who intended to develop a vacation resort. In 1921, the Department of Militia and Defence turned the island over to the Department of the Interior.

The Historic Sites and Monuments Board of Canada, created in 1919, declared Fort Lennox a site of national historic interest. Île aux Noix served as an internment camp during the Second World War and, once the conflict was ended, as a summer camp for teenagers. The island was made a national historic park by order-in-council in 1940.



WITNESS TO HISTORY

STRUCTURES

Although there are no longer any visible remains on Île aux Noix of either the French fortifications of 1760 or the first British fort of 1779, Fort Lennox itself is in remarkably good condition. With its earthen ramparts flanked by four angled bastions, its wide, flooded moat and its military buildings, the fort as a whole is of considerable historical interest and offers several representative examples of military architecture and construction techniques from the early 19th century.

There are three types of structures in place at Fort Lennox: the buildings, the auxiliary structures and the earthworks.

Buildings

The majority of the buildings constructed years ago within the Fort Lennox compound are still standing. Built between 1820 and 1830, the grey limestone buildings were designed using classical elements and simple forms, the whole reflecting painstaking attention to architectural detail. These buildings are: the guardhouse, officers' quarters, barracks, powder magazine as well as the stores (north and south).

Auxiliary Structures

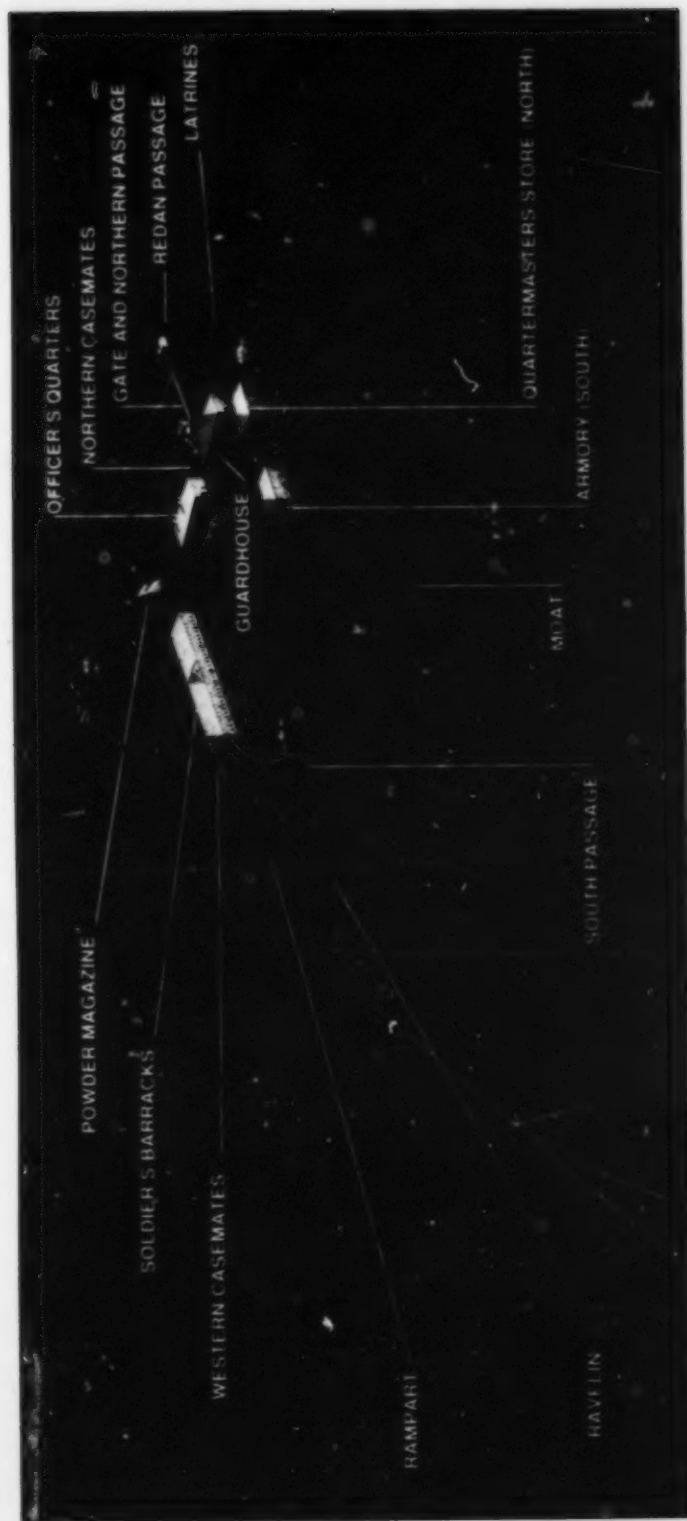
Seventeen casemates, six in the north curtain and eleven in the west curtain, were built at Fort Lennox between 1819 and 1830.

Since Fort Lennox was surrounded by a flooded moat, access bridges had to be built at the north entrance and the ravelin.

Earthworks

While the size and shape of the ramparts and bastions are still quite visible at Fort Lennox, the fortification's appearance has altered somewhat over the past 150 years. The earthworks have been subject to erosion, which has eaten away anywhere from a few centimetres to over a metre of earth; the weapons have all disappeared.

LOCATION OF THE STRUCTURES



ARCHEOLOGICAL REMAINS

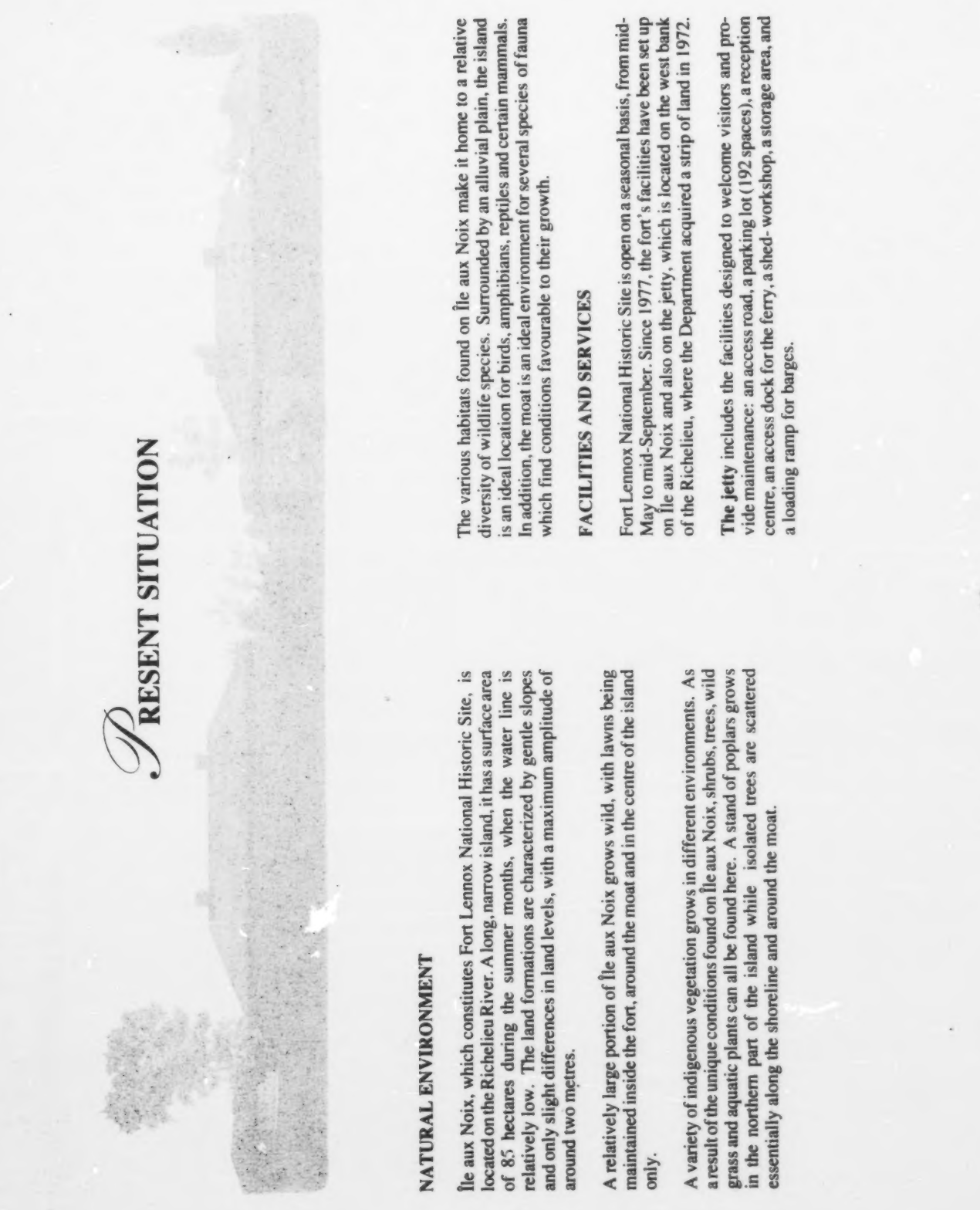
Since 1958, Ile aux Noix has been the site of at least a dozen archeological excavations in addition to underwater exploration carried out around the island. However, only a fraction of its considerable potential has been tapped: of the 77 buildings, structures and other facilities which have been catalogued outside the Fort Lennox compound using historical documents, only 9 buildings, 2 small cellars, 1 latrine and 1 well have been thoroughly excavated.

Although the archeological research conducted to date has not even begun to tap the island's vast potential, it has nonetheless contributed to the significant body of information on most of the major periods of the site's occupation:

- the French fortifications (1759-1775)
- the American Occupation (1775-1776) and the first British fort (1778-1812)
- the shipyard (1812-1834)
- Fort Lennox (1819-1870) and the buildings outside the compound
- the Canadian era (1870 to the present)

ARTIFACTS

Given the varied nature and scope of the archeological digs carried out on the island for over 30 years now, the artifacts collected come from different types of buildings and date back to between 1761 to 1870. Made mainly of ceramic, porcelain, glass and metal, these objects likely represent the various activities which took place on the island over nearly 200 years.



PRESENT SITUATION

NATURAL ENVIRONMENT

Île aux Noix, which constitutes Fort Lennox National Historic Site, is located on the Richelieu River. A long, narrow island, it has a surface area of 85 hectares during the summer months, when the water line is relatively low. The land formations are characterized by gentle slopes and only slight differences in land levels, with a maximum amplitude of around two metres.

A relatively large portion of Île aux Noix grows wild, with lawns being maintained inside the fort, around the moat and in the centre of the island only.

A variety of indigenous vegetation grows in different environments. As a result of the unique conditions found on Île aux Noix, shrubs, trees, wild grass and aquatic plants can all be found here. A stand of poplars grows in the northern part of the island while isolated trees are scattered essentially along the shoreline and around the moat.

The various habitats found on Île aux Noix make it home to a relative diversity of wildlife species. Surrounded by an alluvial plain, the island is an ideal location for birds, amphibians, reptiles and certain mammals. In addition, the moat is an ideal environment for several species of fauna which find conditions favourable to their growth.

FACILITIES AND SERVICES

Fort Lennox National Historic Site is open on a seasonal basis, from mid-May to mid-September. Since 1977, the fort's facilities have been set up on Île aux Noix and also on the jetty, which is located on the west bank of the Richelieu, where the Department acquired a strip of land in 1972.

The jetty includes the facilities designed to welcome visitors and provide maintenance: an access road, a parking lot (192 spaces), a reception centre, an access dock for the ferry, a shed- workshop, a storage area, and a loading ramp for barges.

On the island as such, facilities can be found both inside and outside the fortified compound.

Outside the fortifications, boats can moor at either of the two docks; a new cement dock was built on the eastern side of the island in 1984 and is intended mainly for cruise boats, while on the western side of the island the new wooden dock, rebuilt in 1988, is used mainly by the ferry, which shuttles between the island and the mainland every half hour.

A picnic and games area, equipped with washroom facilities built in 1977, is located in the central part of the island. Buildings used for maintenance are located in the western central part of the island, away from the picnic area.

Within the fortifications, the facilities are used for administration, interpretation activities and services designed for visitors. Most of the interpretation facilities date back to the early 1970s and consist essentially of re-creations of the historical era during which certain buildings were occupied. A team of guides leads the interpretation activities held within the fortified compound and gives guided tours inside the main buildings. A snack bar and souvenir shop, managed by a cooperative association, as well as public washrooms, are the main services and facilities offered to visitors.

VISITORS

Each year, Fort Lennox National Historic Site welcomes some 45,000 visitors. Most of them (88%), are from the Greater Montréal area and travel to the island by ferry. Based on a market study carried out in 1989 on current and potential clientele, Fort Lennox National Historic Site is a unique, underexploited, relatively unknown park product which, on the whole, is very satisfying. The main improvements desired are the following: access to buildings, period furniture, guided activities, display of artifacts and guided tours. The island's natural environment is also perceived as a potential area for development through interpretation and outdoor leisure activities.

Although the annual potential market is estimated at 800,000 people, the current level of market penetration is only 5.6%. The current visitor rate is distinctly lower than the potential attendance and any increase in visitors will depend on the development and marketing efforts made.

REGIONAL CONTEXT

Fort Lennox National Historic Site falls within the boundaries of the municipality of Saint-Paul-de-l'Île-aux-Noix, a few kilometres downriver from the American border and is part of the regional county municipality of Haut-Richelieu, which itself falls within the Montréal administrative region. This historic site can be accessed by Highway 223, via highways 20 and 10.

It is located in the Richelieu Valley, which is part of the Montérégie tourism region. The region's tourism potential can be found primarily in the size and diversity of its natural attractions and historic sites for a clientele composed primarily of tourists seeking rest and relaxation. In this respect, Fort Lennox bears witness to the strategic role once played by the Richelieu River as an important transportation route. It represents one of the cornerstones of the "Fort Valley" tourism product, whose purpose is to create a tourism circuit focusing on military history and architecture.



DEVELOPMENT ISSUES

Fort Lennox National Historic Site today is a preferred destination whose architectural and environmental qualities never cease to surprise and amaze the some 45,000 visitors who tour the site each year.

However, although the park is already highly rated, improvements are needed in order to tap its exceptional potential so that visitors can better enjoy the heritage resources available and benefit from an even more enriching experience.

Given the site's current situation and goals, the following considerations must be taken into account in the park's development:

FORT LENNOX NATIONAL HISTORIC SITE

- *is located on an island in the middle of the Richelieu River;*
- *contains a virtually intact, 19th-century fortified compound;*
- *encloses under-utilized military buildings of exemplary architectural quality;*
- *is endowed with a major collection of "historic" artifacts (reproductions) which show signs of aging;*
- *boasts numerous archeological remains and artifacts, dating from the 18th and 19th centuries, which remain almost hidden;*
- *contains a wide variety of ecological environments;*
- *offers areas for outdoor recreation and relaxation;*
- *receives a large number of organized groups;*
- *is visited by people primarily from the Greater Montréal region;*
- *offers visitors interpretation services and facilities which need to be completed;*
- *represents a major attraction within a well-defined tourism corridor;*
- *has raised certain expectations among local organizations regarding its development and management.*

Development issues of the Fort Lennox National Historic Site focus on the following main concerns:

PRESERVATION AND USE OF HISTORIC STRUCTURES

The military buildings and earthworks at Fort Lennox are resources of primary importance. They:

- form an authentic, homogenous whole, dating from a single period (the 19th century);
- possess exceptional architectural qualities illustrating 19th-century British military engineering practices;
- bear witness to the various uses which marked the site's development;
- house a rather large area of indoor space.

These structures could be preserved in their historic and architectural entirety and be exploited both as an *object* and a *site* of interpretation.

However, this is precisely the problem: how to ensure the preservation of the historic structures while making them accessible for public use. The main constraints limiting the use of building interiors stem from requirements respecting fire protection, universal accessibility, lighting and power supply, as well as the layout of exits.

The buildings' historic function, the layout of the indoor areas, their accommodation capacity, accessibility and the prevailing climatic conditions (e.g. humidity) are the primary factors likely to influence the buildings' future use.

As for the earthworks, the problem basically consists in choosing the means by which the slopes may be stabilized to avoid any further degradation of the ramparts' current profile.

PRESERVATION AND DEVELOPMENT OF ARCHEOLOGICAL REMAINS

The structural remains already identified and/or unearthed, as well as the artifacts collected during numerous archeological digs conducted on Île aux Noix, are resources in many respects. They:

- bear witness to the various periods of the island's occupation;
- reflect the size and geographic distribution of the facilities built on the island;
- represent the only physical elements which bear witness to the periods prior to the construction of Fort Lennox;
- reflect the variety of functions and activities which took place on the island;
- contribute to the diversity of the island's attractions.

Furthermore, historic documents reveal that these resources represent only a small part of an immense potential which could be preserved and used as a means of understanding and illustrating the site's history.

However, these archeological resources are not apparent to visitors to the island, since the remains which were unearthed were buried again following the digs. As well, the suspected scope of the as-yet-unidentified remains and their distribution over the island impose some constraints both on research, which could be conducted in the short or long term, and on the future use and development of areas outside of the fortified compound.

MANAGEMENT OF THE ARTIFACTS COLLECTION

The artifacts collection (over 2,000 objects) set up at Fort Lennox between 1972 and 1974 is almost exclusively composed of reproductions. It consists primarily of pieces of furniture, costumes and weapons which make up an integral part of the period reconstructions inside some of the buildings. A number of these objects are used during interpretation activities. The collection has great interpretation potential, since the objects:

- are tangible elements which help illustrate certain aspects of the site's history;
- have a major visual impact on visitors and help create an ambience;
- can be used effectively as part of interpretation activities.

The conservation and use of this collection, however, poses some problems. The climatic conditions inside the areas used for storing and displaying these objects, the lack of resources required to ensure their systematic upkeep, and the repeated handling of some of them are all factors which, given the age of these objects, contribute to their deterioration.

CONSERVATION AND PRESERVATION OF THE NATURAL ENVIRONMENT

Over the years, the biophysical features of Île aux Noix have evolved to such an extent that they are now an extremely important part of the site. Like the archeological and historic resources, these natural resources are part of our national heritage and, as such, deserve to be preserved. Today, they form an environmental framework contributing to the character, ambience and beauty of the site.

For development purposes, the island's natural environment boasts several interesting features:

- Île aux Noix and the Richelieu River are geographical factors linked to the site's history;
- the establishment of buildings and facilities on the island and the construction methods used were dependent upon the soil type, topography and the height of the water table;
- the flora and fauna bear witness to the site's development;
- the biophysical features contribute to the variety of interesting features on the island and its general attraction.

From this perspective, the site's natural features deserve to be conserved and exploited both as part of the landscape and for interpretation purposes.

However, some species of flora and fauna may conflict with the preservation or development of the site's historic components. For example:

- the many trees on the moat's rampart are incompatible with this structure's defensive role and could therefore affect its historic aspect;
- the turtles which now inhabit the moat would be adversely affected by the historic reconstruction of the ramparts;
- shrubs and trees are growing in areas concealing archeological remains.

From a biophysical perspective, the flooding of the banks each spring, as well as the fact that a large section of the island remains under water for part of the year, further limits the island's use and development.

PRESENTATION OF THE SITE'S HISTORY

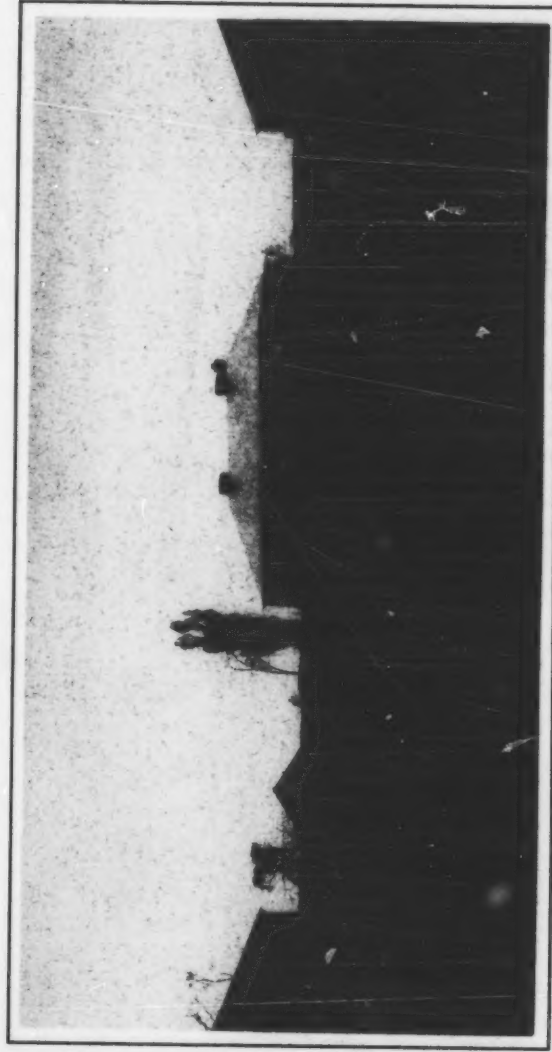
At Fort Lennox, the presentation of the site's history through selected themes is at the heart of the site's overall development context. Through interpretation facilities and activities, the Canadian Parks Service could inform visitors about and help them appreciate the various facets of this site's history.

The problem therefore basically consists in determining the means by which the selected historic themes could be adequately communicated to the various categories of visitors while taking the potential of and limitations imposed by the historic, archeological and environmental resources of the site into account.

In this regard, the main factors to be considered are as follows:

- while the overall theme selected covers the entire period of occupation of Île aux Noix from the 18th century to the present, those themes associated with the British occupation and Fort Lennox itself are stressed;
- the major historic resources (military buildings and earthworks) are associated exclusively with one period of the island's occupation (beginning with the construction of Fort Lennox);
- within the fort's compound, the presence of a homogenous set of structures dating from a single period offers exceptional potential in terms of making visitors aware of the site's functional and spatial organization;

- the archeological resources and the environment's natural features are associated with different periods of the island's occupation;
- the means of interpretation currently used are greatly appreciated by visitors;
- the low percentage of indoor areas currently used for interpretation purposes limits the accommodation capacity of the fortified compound;



In addition to purely "technical" concerns, *the major challenge should specifically consist in creating, by carefully selected means, an ambience which will enable visitors to feel the "spirit" of the site.*

VISITOR ACCESS AND RECEPTION

The unique layout of the property, which takes in a jetty on the west bank of the Richelieu and an island in the middle of the river, represents both an asset to and a constraint on visitor access and reception. In this regard, the main considerations are as follows:

- if the majority of visitors were received on the mainland, the main, newly built support infrastructures could be concentrated there, thereby allowing the island to be left relatively "intact";
- accessing the island by boat represents an interesting experience for visitors;
- because there exists two major access points to the island (eastern and western docks), "duplicate" reception and orientation facilities are needed on the island. However, their existence makes it possible to "specialize" access points based on visitor types and/or modes of access;
- the location of Île aux Noix within a highly popular boating corridor poses access problems for individual pleasure boaters who wish to anchor there.

In general, the question of accessibility for persons with disabilities remains a major concern which must be considered in relation to each of the site's functions and activities.

RECREATIONAL AND RELATED SERVICES

The site's unique location, layout and natural attractions make Île aux Noix an ideal area for outdoor relaxation and recreation. In this regard, the main elements to be considered are as follows:

- the island, located within a highly popular boating corridor, is a choice destination both for local pleasure boaters wishing to picnic on the island during an excursion on the Richelieu and for families who plan "a day outdoors on the island;"
- the size of wetlands flooded each spring and sectors with high archeological potential limit the development possibilities for those open areas which are located outside the fortified compound and which could be used for relaxation and recreational purposes;
- families and school groups account for a large percentage of visitors to Fort Lennox; they fall within visitor categories for which rest and recreational areas are especially important.

However, the key element in deciding on appropriate recreational and related services is identifying the main role to be emphasized for this site, a role which will depend on the type of experience it is hoped visitors will have.

REGIONAL INTEGRATION

Fort Lennox is located within a region in which the many tourism development organizations have shed light on the importance of joint action between the various local agents and partners. In this respect, several foundations have already been laid:

- since 1986, a local volunteer organization, "Les Amis du Fort-Lennox," has participated in managing and operating the site; it manages the reception centre, a souvenir shop and a snack bar;
- Fort Lennox National Historic Site is already an integral part of cruises on the Richelieu leaving from Saint-Jean-sur-Richelieu;

- in the Haut-Richelieu region, Fort Lennox is considered a major element in the tourism product, and one of the cornerstones of the "Fort Valley" product to be promoted;
- regional expectations are high with regard to the site's development.

Given all these factors, the main challenge, in terms of regional integration, consists in formulating development and management methods for Fort Lennox National Historic Site which would reconcile regional expectations with the objectives of the Canadian Parks Service.

MANAGEMENT AND OPERATION

The site's layout and the size and diversity of its developable physical resources, the nature of its facilities and its attendance pattern are elements which, combined with the lack of human resources available, contribute to the difficulties involved in managing and operating the site.

ATTENDANCE

The site's location and layout, the nature and size of its facilities and attractions, the cost of accessing the island and the site's promotion are elements which, combined with climatic conditions, are likely to influence attendance at Fort Lennox National Historic Site. In this regard, the following main points must be emphasized:

- Fort Lennox National Historic Site is located near the largest population pool in Québec (the Greater Montréal area) and major tourist destinations;
- it is located along a major tourism corridor (the Richelieu Valley) containing land and sea routes connecting the Montréal area to the northeastern United States;
- it is located near a major pool of school clientele.

Given the site's extremely high potential in terms of markets and developable tourism product, *the problem of site attendance essentially hinges on choosing the role to be emphasized based on the experience it is hoped visitors will have.*



However, respect for the harmonious atmosphere currently reigning on this fortified island, and preservation of its *distinctive character*, dubbed the site's "*spirit*", "*soul*", or "*ambiance*", will remain at the heart of Fort Lennox development concerns.



DEVELOPMENT GUIDELINES

A number of basic guidelines were established in keeping with the following concerns:

PRESERVATION AND USE OF HISTORIC STRUCTURES

- Conservation of the fort's historic structures and maintenance of their architectural integrity based on their different uses through time.
- Visitor understanding and enjoyment of the historic structures and conservation activities carried out on them.
- Conservation of significant structures, objects and areas which bear witness to the site's successive uses.
- Maximum use of building interiors for the benefit of visitors.
- Development of uses for building interiors which respect the buildings' specific nature.

PRESERVATION AND DEVELOPMENT OF ARCHEOLOGICAL REMAINS

- Preservation of identified building remains and visitor awareness of their presence and significance.
- Assessment of the island's archeological potential and preservation of sectors containing remains.
- Continuation of selective archeological digs to support the presentation of the target themes.
- Exploitation of archeological resources as part of the presentation of the site's history.
- Preservation and study of the collection of archeological artifacts to ensure the most accurate interpretation of the target themes.
- Display of the most representative objects from the various periods of the island's occupation.

MANAGEMENT OF THE HISTORICAL OBJECTS COLLECTION

- The presentation of authentic objects.
- Replacement of dilapidated objects.
- Conservation and upkeep of the collection under favourable conditions.
- Expansion of the collection based on interpretation needs.

CONSERVATION AND PRESENTATION OF THE SITE'S NATURAL ENVIRONMENT

- The conservation and development of the natural environment will be subject to the development requirements for the site's historical role.
- Conservation of the site's natural environment will be in line with the requirements for the historical components.
- Visitor enjoyment of the natural components which contribute to the site's environment quality and ambience will be encouraged.
- Natural environments which are of particular interest will be preserved.
- Visitor awareness of the environment's natural components will be developed.
- When determining the means by which to develop the historical aspects of the site, an assessment of environmental conditions will be taken into account.

PRESENTATION OF THE SITE'S HISTORY

- Through the target themes, visitors will learn about the specific characteristics of military engineering practices and way of life on Île aux Noix.
- The physical resources will be developed as much as possible for interpretation purposes.
- Interpretation methods that respect the architectural authenticity of the buildings will be used.
- The interpretation program will attempt to respond to the interests of a varied clientele.
- Various interpretation methods will be used.

VISITOR ACCESS AND RECEPTION

- Most visitor reception and information facilities and services will be set up on the mainland.
- Visitors will have access to reception and information services and/or facilities at each of the island's two major access points, as well as in the main sectors of interest.
- As many services and activities as possible will be made accessible to persons with disabilities, taking into account the site's specific architectural and environmental characteristics.

RECREATION AND RELATED SERVICES

- Leisure activities which are complementary to the visit of the historic site will be maintained, and the appropriate support facilities will be installed.
- Visitors will have access to the necessary facilities and services to ensure that their stay on the island is pleasant, comfortable and safe, taking into account the site's main purpose.

REGIONAL INTEGRATION

- Fort Lennox will be developed so as to enhance the Richelieu Valley tourism product.
- Community members will be encouraged to provide services which are compatible with the site's role.
- The various regional and local partners will be encouraged to work together.

MANAGEMENT AND OPERATIONS

- The site will be open to the public on a seasonal basis.
- Offices for park employees as well as storage spaces will be set up on Île aux Noix.
- The basic service offer will be adjusted to the available human and financial resources.
- Partnerships will be developed to ensure visitors are provided with the required services.

- The existing partnership with the cooperative association will be consolidated, making them preferential partners.
- Quality control of visitor services will be maintained.
- Legislation governing resource conservation and public safety will be enforced.

ATTENDANCE

- Attendance aims which take into account the site's visitor capacity in terms of physical support, human resources and visit quality will be established.
- The target clientele will be established based on the site's main role.
- The marketing strategy and promotional tools used will respect the established attendance aims.
- The required information will be disseminated to the target clientele.

In addition, in the specific context of protecting and communicating the cultural heritage of Fort Lennox, and in keeping with *"the spirit of the site"*, the following aspects will require particular attention:

- the island crossing;
- the architectural unit of the fortified compound;
- site activities;
- highlighting of the site's archeological aspect;
- supervision of recreational activities;
- development of the "nature" component.



CONCEPT

The proposed concept defines the framework for the development options established for the Fort Lennox National Historic Site. It thus lays a *common foundation* for the development options as such.

This proposal is based mainly on the site's geographical layout and the experience acquired during the site's fifteen years of operation; it considers both the potential and constraints inherent to the development of the site's resources, as well as the improvements required in keeping with the established objectives and aims.

JETTY

Under the proposal, existing reception, information and orientation services are maintained and reinforced on the jetty; services and facilities are improved so as to adequately serve all categories of visitors and meet universal accessibility standards.

ISLAND DOCKS

Existing reception, information and orientation services are maintained and reinforced and the facilities improved to better serve visitors.

FERRY

Information and interpretation activities are part of the ferry crossing as such. The possibility of offering a mini-cruise around the island is also being considered.

FORT COMPOUND

This area is devoted mainly to the conservation and communication of the site's cultural heritage, while administration and service functions play a secondary role. The architectural qualities of the buildings as a whole are preserved and highlighted by way of stabilization and restoration measures. Building interiors, particularly on the main floor of the

buildings, are used mainly to present the themes focusing on military engineering, interaction between nature and civilization, and the occupation of the British garrison.

Additional facilities such as restrooms, a snack bar and souvenir shop are located on the main floor of one of the buildings. Administrative offices are also located in one of the buildings within the compound, in an area less accessible to the public.

The earthworks and the moat surrounding the fort are an integral part of the compound. Their preservation will allow visitors to better understand the site's significance.

ARCHEOLOGICAL SITES AT THE SHIPYARD AND EARLIER FORTIFICATIONS

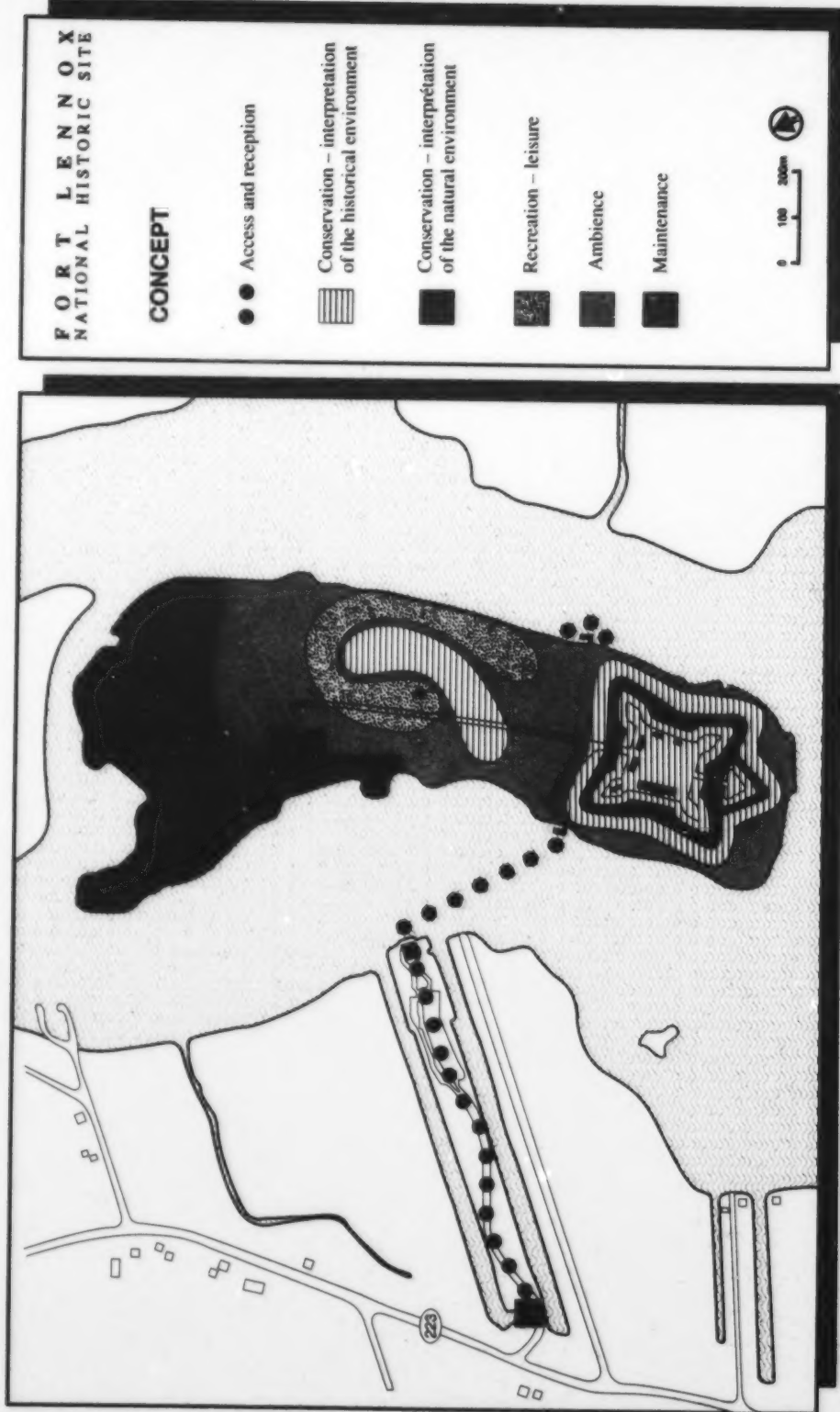
Conservation and interpretation are the main functions of this area. Themes pertaining to military and civilian occupation and shipbuilding will be presented.

SECTORS OF NATURAL INTEREST

Conservation and interpretation are the main functions in a number of specific areas, while recreation is a secondary function in certain relatively well-defined areas.

Development, conservation and interpretation of the moat surrounding Fort Lennox and the wetlands on the northern part of the island fall under the proposed theme of interaction between nature and civilization.

While touring the site, visitors can also enjoy a rest and picnic area located on the central part of the island, easily accessible by trails.





DEVELOPMENT OPTIONS

Development options were formulated in terms of an *overall visit experience*. These options are based on the site's fundamental characteristics, and the needs and expectations of current and potential clientele; they also are influenced by visitors' *overall perceptions* of Île aux Noix, which are in turn influenced by the site's very *identity* as a *fortified island*.

Basically, these options differ in the interpretation activities and means used to present the site's heritage resources and history.

Both options, however, should make it possible to meet the needs and expectations of the various current and potential visitor categories, which may be summed up as follows:

- individuals or families and organized groups, from the region or elsewhere, whose main objective is to discover new sites of historical, cultural or natural interest considered specific tourist attractions;
- individuals and school groups from the community, region or elsewhere who are interested in history, wish to benefit from an enriching visit and appreciate the site's authentic nature;
- individuals or families from the community, region or elsewhere who are attracted by the site's natural beauty, appreciate visiting the island and are likely to discover its historic aspect.

OPTION 1: TREASURE ISLAND

The Visit Experience: Exploration of the Site

This option offers visitors an experience based on *exploration of the site* and discovery of the island's historical, architectural, archeological and natural treasures which have been carefully preserved from the 18th century to the present and are now ready to tell a tale and offer up the key to their mysteries...

The island becomes a place of play and adventure, beckoning visitors to discover the traces left by the occupants from different periods throughout its history. It appeals to the imagination: fiction, dreams and fables intermingle to create a stimulating atmosphere...

Before visitors even set foot on the island, an atmosphere of suspense is created during the ferry crossing: gaining access to the island's treasures becomes an experience which is both mysterious and exciting. Once on the island, visitors can explore it at their own pace, as their fancy takes them...



Methods: Originality and Fantasy, Audiovisual Decor

Development is based mainly on the conservation and use of the *exploration potential* offered by the site's natural and historical aspects. The methods used to enable visitors to discover and enjoy the island's many treasures are *original* and *creative*, just like the experience visitors will hopefully have on the island.

Visitors are called on to play an active role in exploring and discovering the site. The proposed learning experience, which is both sensitive and cognitive, calls for multimedia and environmental techniques to create the appropriate atmosphere and ambience.

The specific concerns of the spatial and functional organization are as follows:

On the Jetty

The various opportunities for discovering the island as well as the wide range of services available are laid out in modules, flyers, information brochures, visitor's guides, etc.

Except for those visiting the island as part of a cruise, all visitors to the Fort Lennox National Historic Site have the possibility of benefiting from the facilities and services offered on the site.

On the Ferry

The experience of paying a visit to treasure island truly begins aboard the ferry, and the staff are to play a specific role in this respect. A mini-cruise around the island would also enable visitors to become familiar with the island's shape and geographical location before undertaking the quest for its famous treasures...

On the Island Docks

Near the landing areas can be found attractive outdoor modules which offer messages of welcome and inform visitors about the island's precious treasures, facilities and services, and the regulations in force.

Inside the Fort Compound

The Fort Lennox compound remains the island's *pièce de résistance*. Visitors have only to cross the moat and pass through the doorway to find the treasures of the architectural heritage awaiting them.

These architectural treasures act as a link between the past and present; they are witnesses to days of yore, traces of the past which, today, stand as a reminder of our history. The buildings mutely display their unique architectural features, allowing visitors to discover the people who once called this site home.

The creation of an *audiovisual decor* aids in developing and enhancing the buildings' interiors. Areas or rooms which are typical of a given period and representative of specific functions are furnished in period style and equipped with sound tracks, while others are presented using only sound and light. Lighting, sound tracks, projections on inside walls and holograms contribute to the magic which allows visitors to experience the site's past...

One of the buildings houses the reception and information services. This building also houses an exhibition using the collection of historical objects which familiarizes visitors with the site's theme.

Inside the compound, visitors choosing the self-guided tour can thus explore the site to their heart's content, independently or with the help of a visitor's guide or an audioguide. They can also benefit from the services of guides posted at strategic locations. Organized groups or visitors on cruises may choose to take guided tours.

With the exception of nature enthusiasts who prefer outdoor activities as part of an island excursion, most visitors are likely to enjoy exploring Fort Lennox, since the activities and services offered correspond to their interests and expectations.

At the Archeological Sites of the Shipyard and Earlier Fortifications

The site's archeological treasures, long hidden, are gradually being discovered by visitors. The identified remains, associated with the French fortifications, the first British fort and the shipyard, are clearly displayed and contribute to an understanding of the site's history. These remains are tangible reference points which link the site's past to its present.

Some of the remains have been unearthed, while others are simply outlined on the ground. In the main sectors of interest, a number of booths house interpretation modules; information panels, illustrations, and sound tracks inform visitors about the various forms of occupation the site has seen throughout the ages, and enable them to understand the role of archaeology in the quest for this information.

Each year, an archeological dig takes place in one of the priority sectors, so deemed because of its potential: these activities are included in the visit. Information panels, and occasionally the staff on hand, enable visitors to understand the ongoing activity in relation to the site's history.

With the exception of organized groups whose visiting time is limited, visitors are generally drawn to these sites of archeological interest, and are eager to discover new treasures and solve certain mysteries...

In the Sectors of Natural Interest

While a number of natural treasures, valued for their rarity or fragility, are governed by special protection measures, they can still be discovered by curious visitors who are particularly sensitive to the island's riches.

A booth housing an interpretation module, trails adapted to specific sector conditions, a visitor's guide, and panels at strategic locations on the trail are all tools used to enable visitors to discover and enjoy the site's natural treasures.

The picnic and rest area has kiosks equipped with tables and benches. These booths provide shade and protection against the elements, and can also be used as an activity area for special occasions. Restrooms and water fountains are located nearby. A play area for children has also been set up and includes representative structures which are occasionally used in the activities.

With the exception of visitors on cruises, whose stay on the island is limited, and history enthusiasts who prefer to concentrate on the site's historical treasures, most visitors are attracted by at least one of the natural interest sites on this treasure-laden island.

OPTION 2: SHROUDED IN THE MISTS OF TIME

The Visit Experience: Travel back through Time

This option allows visitors to *travel back through time* and to experience, through the architecture of a 19th-century military fort and the way of life in a 19th-century garrison, another era...

Time stands still at Fort Lennox: the visitors' journey through time catapults them back to the period 1820-1830. They experience life during this era and use Fort Lennox as a reference point with which to explore other periods of occupation of the fort and island.



Methods: Period Atmosphere, Theatrical Scenes

Development is based more on the conservation and use of the site's *illustrative potential*. The objective is to have visitors undergo a true-to-life experience; the development methods selected are thus in keeping with this more traditional approach, which casts the visitors as spectators. The suggested emotive and cognitive learning process is closely linked to the theatrical activities that bring the site alive, at least for the duration of the visit.

From the moment they leave the mainland visitors can make out the silhouette of the fort, outlined from afar. During the crossing, and once on the island heading toward the compound, they gradually begin the transition in time. When they pass through the doorway of the compound, time stops, and visitors suddenly find themselves in another era. The site's setting and decor create an atmosphere conducive to travelling through time.

The specific spatial and functional organization of this option are as follows:

On the Jetty

Presentation modules, pamphlets and information brochures, and audio-visual presentations illustrating certain activity scenes filmed within the fort compound inform visitors of the opportunity to travel back through time and meet people from another era, and to benefit from the services and facilities available on site.

Except for those visiting the island as part of a cruise, all visitors have the possibility of benefiting from the facilities and services located on the jetty.

On the Ferry

The visit to the island shrouded in the mists of time begins on the ferry. The closer they get to the island, the more visitors are prepared to experience a voyage to the past. A "character" from Fort Lennox welcomes them and accompanies them to the island, where they are informed of what life is now like at the fort. Mini-cruises would enable visitors to familiarize themselves with the site's geographical layout and the island's strategic importance.

On the Island Docks

Near the landing areas can be found attractive outdoor modules which offer messages of welcome in keeping with the atmosphere of the past and inform visitors about the island's facilities and services, and the regulations in force.



Inside the Fort Compound

On the drawbridge, visitors are welcomed by a soldier in period costume who situates them in time and place. As they pass through the doorway into the compound, they immediately become a part of military life of 1820-1830. The decor is already in place: the buildings have been conserved and restored, and cardboard figures in period costume are in position. Scenes from everyday life await the visitor around every corner.

The architecture is the key element to understanding the site and is therefore the means used to help visitors understand the various forms of occupation of Fort Lennox throughout the ages.

The creation of a "*period atmosphere*" enables visitors to relive the past through certain aspects of the site's occupation. Inside each of the buildings, areas or rooms which are typical of the period and representative of specific functions are furnished in period style, and *theatrical scenes* bring them to life. The scenarios and dialogues emphasize the links between the site's physical characteristics (location, building type, materials) and the living conditions which prevailed at Fort Lennox during the years 1820-1830. The roles acted out by the staff enable visitors to travel between past and present.

In addition to this type of presentation, most of the buildings have areas designed to familiarize visitors with all periods of the fort's occupation. Presentation modules, audiovisual presentations, period reconstructions, and exhibitions of archeological objects are all used to inform visitors of the activities which took place here before and after 1820-1830.

One of the buildings is reserved for visitors wishing to continue travelling through time into the future. They can contemplate a number of aspects related to the site's history: wars, border disputes, preparing for an assault, topics which link the past, present and future.

Inside the compound, visitors choosing the self-guided tour can thus explore the site to their heart's content, independently or with the help of a visitor's guide or an audioguide. Organized groups or visitors on cruises may choose to take a guided tour, accompanied by a Fort Lennox soldier in period costume.

With the exception of nature enthusiasts who prefer outdoor activities as part of an island excursion, most visitors are likely to appreciate the opportunity to travel back through time at Fort Lennox, since the activities and services offered correspond to their interests and expectations.

At the Archeological Sites of the Shipyard and Earlier Fortifications

The site's archeological remains—witness to another era—are the tangible springboard to the visitor's journey into the past and their discovery of a part of the site's history.

The identified remains, associated with the French fortifications, the first British fort and the shipyard, are clearly displayed to emphasize the site's former occupation. Some of the remains have been unearthed, while others are simply outlined on the ground. Information panels and

visitor's guides enable visitors to continue their journey through time and learn more about the various forms of occupation the site has seen throughout the ages.

With the exception of organized groups whose visiting time is limited, visitors looking to explore all periods of the island's occupation get great joy out of this sector and the discovery of its long-hidden treasures.

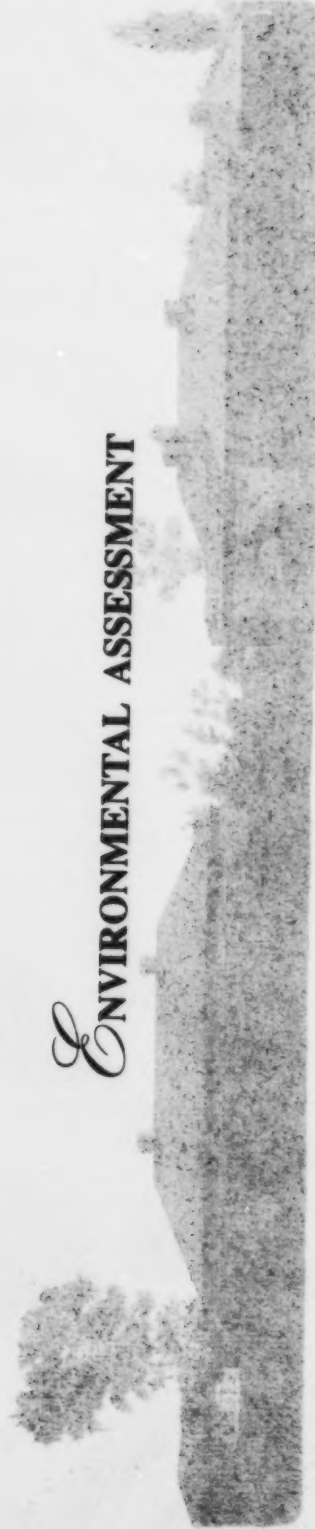
In the Sectors of Natural Interest

While a number of natural treasures, valued for their rarity or fragility, are governed by special protection measures, they are still accessible to visitors wishing to learn more about this aspect of the island.

Trails adapted to specific sector conditions, a visitor's guide, and panels set up at strategic locations along the trails together enable visitors to discover and enjoy the site's natural environment, which bears witness to the gradual changes in its development.

The picnic and rest area in the central sector of the island is equipped with restrooms and a kiosk which provides shade and protection against the elements.

With the exception of visitors on cruises, whose stay on the island is limited, and history enthusiasts who prefer to spend more time exploring the places of days gone by, most visitors are drawn to at least one of the natural interest sites on this island.



ENVIRONMENTAL ASSESSMENT

FEDERAL ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS

The Federal Environmental Assessment and Review Process (FEARP) is a mechanism used by federal departments and organizations to determine, assess and mitigate the environmental consequences of the facilities and activities they plan for their territories. This process operates on a self-assessment principle.

The Canadian Parks Service uses the FEARP to ensure that natural resources management respects its main mandate to conserve Canadian heritage. FEARP procedures require that the Canadian Parks Service submit its management plans to environmental analysis. This chapter deals with the results of the analysis of the initial impact study which aims to determine, assess and mitigate the possible environmental effects of the development concept and options presented within the framework of preparing the management plan for Fort Lennox National Historic Site.

BASES OF REFERENCE

The main concern regarding Fort Lennox National Historic Site must be to preserve the historical elements of its heritage. However, the relatively numerous natural elements are also part of its heritage and must therefore be protected. Thus, site management must harmonize this heritage duality.

Drawing up the development options constitutes one of the steps in preparing the management plan of a site. This planning process itself represents a form of environmental assessment as the development and use projects are closely scrutinized and are based on a detailed analysis of the basic resource data.

Fort Lennox National Historic Site has been in operation for a number of years and the proposed development options are mainly based on the existing structures and facilities while implementing different approaches.

The required facilities are common to both of the proposed options. Given this context, the present assessment is being done to:

- identify the present and potential impacts of these facilities; and
- assess the possible consequences of the activities involved in the two development options.

Mitigation measures are also proposed in order to eliminate or reduce the environmental effects linked to the proposed activities and management orientations.

ANALYSIS OF THE POSSIBLE IMPACTS

Assessing the environmental impact of the proposed development options here is based on orientations and concepts, and is therefore general in nature. It must be pointed out that this site has almost entirely been altered by previous human activity. A large part of the island presently sustains natural resources that are now evolving freely but which underwent alterations in the past. Facilities and human activities are likely to have a negative effect on the intrinsic value of the resources, both historic and natural.

Analysis of the negative impacts of the facilities and activities must take into account the scope and intensity of the impacts as well as how permanent their effects are. This analysis first deals with site attendance and development elements which are common to both options. Elements that are specific to only one of the options are treated afterwards.

ATTENDANCE AND COMMON ELEMENTS

• Pressures of site attendance on the environment

Fort Lennox National Historic Site is considered an important agent on the regional level. The local population takes ample advantage of the opportunity to enjoy recreational activities at the site. However, the territory involved is relatively small in view of the potential clientele and the site's limited support capacity. So that the environment does not suffer deterioration through over-intensive use, the support capacity should be assessed. Intensive use of the site may cause major physical alterations such as soil compaction and destruction of the plant cover. In addition, an increase in clientele could create the need for new structures such as trails, and have negative impacts on the historical remains and the natural resources.

Maintenance measures could also have consequences on the environment. The use of pesticides represents a risk to the environment and public safety, and waste could cause deterioration of the site's natural ambience and disturb wildlife behaviour.

• Reception on the Mainland

The necessary structures, that is, the reception building, outdoor information modules, the dock and ferry access ramp, are already in place. Improvements only are needed and no adverse environmental impacts are anticipated in this regard.

• Access to the Island

The structures required for this function, the two docks, are already in place. No improvements to the west dock have been planned at this stage and no significant environmental impacts are anticipated here. However,

the approaches to the east dock represent high archeological potential. Setting up information modules and building an access path are likely to have adverse effects on the archeological remains there.

- **The Fort compound**

Developing the fort compound implies restoring the fort building as well as setting up the interior of those designed for a particular use. The first phase of the work is likely to disturb the ground nearby and destroy the archeological remains that may exist there. The impacts of this work could be reduced to an acceptable level if it were carried out under the supervision of an archeologist.

- **Moat**

Fort esthetic reasons and to protect this historic element from further deterioration, stabilization work on the slopes and cleaning up the moat waters are required. This work could significantly disturb the rampart infrastructure.

Cleaning up the moat waters, in the name of improving the conditions, would be beneficial to the wildlife living there (fish and turtles). Nevertheless, if large-scale work were to be undertaken on the whole moat, the survival of the wildlife would be at risk. This work could have major impacts. By selecting the best methods and techniques and having an archeologist supervise the work, the impacts should be reduced to an acceptable level.

- **Archeological Sites of the Shipyard and Earlier Fortifications**

Outlining on the ground certain remains, installing interpretation panels, and setting out access and interpretation trails could require excavation

work which, even if shallow, may disturb the known remains and archeological grounds in place. In fact, certain remains and artifacts are very close to the surface.

- **Developing Interpretation Trails on the North Part of the Island and around the Ramparts**

Setting up these trails could require excavation work which, even if shallow, might disturb the archeological grounds in areas not yet dug. Because of the denser vegetation and more abundant wildlife in the north part of the island, an interpretation trail in this sector is likely to cause more negative impacts. An analysis of the proposed route should be done before it is built. In addition, the type of trail should be adapted to a wetland environment.

- **Development of Picnic Areas**

The equipment required for picnicking, tables and shelters, will be set up on a lawn space. This type of activity does not generally cause many environmental repercussions. The adverse impacts involved are soil compaction and waste accumulation. On the other hand, archeological remains and grounds risk being disturbed by such facilities.

COMPARISON OF THE OPTIONS FROM AN ENVIRONMENTAL POINT OF VIEW

Two options are proposed, and each one is identified by a theme reflecting the experience intended for the visitors: Option 1: Treasure Island; and Option 2: Shrouded in the Mists of Time. The two options would require basically the same facilities except that Option 1 involves setting up a few picnic kiosques and an interpretation trail on the north part of the island.

MITIGATION MEASURES

Considering the relatively small size of the site, the attendance and recreational use could be termed considerable. On the whole, the potential impacts caused by the activities and facilities required could be described as minor.

The following mitigation measures should be applied in order to eliminate or reduce the potential negative impacts:

- A program of preventive digs and archeological supervision should be implemented while all excavation work is being carried out.
- If necessary, measures should be taken to avoid damaging the remains that are unearthed for interpretation purposes.
- A natural resource management plan should be drawn up for this site in the near future.
- The state of the environment should be monitored to detect deterioration and to take the necessary corrective measures.
- The use of insecticides and herbicides for maintenance purposes should only be used, and in a restricted manner, if mechanical means of control have been proven ineffective.
- To avoid problems of waste accumulation and environmental pollution of Fort Lennox National Historic Site, the waste collection system must be efficient and adapted to the level of site attendance.
- During the next planning phases for developing the site, that is, before carrying out the work, each development and use project should be individually submitted to a detailed environmental review.

According to the prior review based on the information available, it can be concluded that the implementation of either of the development options for this site is acceptable on an environmental level. By applying the mitigation measures listed above, the negative environmental repercussions could be reduced. This environmental assessment should be revised during the subsequent planning and implementation phases.



CONCLUSION



Developing Fort Lennox National Historic Site to reap the maximum benefit from its resource potential and ideal geographical location is a sizeable challenge given the current economic situation.

Preserving the historical, archeological and environmental resources is, however, a means of enabling future generations to continue, even renew, the development measures we could adopt today.

In this respect, the current planning stage must be seen as one of the milestones in a continuous, evolving process likely to trigger action aimed at the development of the site as such. This development will undoubtedly reflect a certain vision of the site at a given time in its history.

